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- (a) hydrating 2-hydroxy-4-methylthiobutyronitrile in a sulphuric acid medium to produce 2-hydroxy-4-methylthiobutyramide, wherein the molar quantity of sulphuric acid relative to the 2-hydroxy-4-methylthiobutyronitrile is between 0.6 and 0.88, the molar quantity of water to 2-hydroxy-4-methylthiobutyronitrile is between 1 and 3, and at a temperature of less than or equal to 60°C; and
- (b) hydrolyzing the 2-hydroxy-4-methylthiobutyroamide in the presence of an additional quantity of water to produce 2-hydroxy-4-methylthiobutyric acid in a reaction mass.

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16. (New) A process according to claim 1, wherein the molar quantity of sulphuric acid relative to the 2-hydroxy-4-methylthiobutyronitrile is between 0.7 and 0.85.

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17. (New) A process according to claim 1, wherein the medium of the hydrating step (a) contains less than 5% by weight of 2-hydroxy-4-methylthiobutyric acid.

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18. (New) A process according to claim 1, wherein the medium of the hydrating step (a) contains less than 2% by weight of 2-hydroxy-4-methylthiobutyric acid.

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19. (New) A process according to claim 1, wherein the medium of the hydrating step (a) contains more than 95% by weight of 2-hydroxy-4-methylthiobutyramide.

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20. (New) A process according to claim 1, wherein the medium of the hydrating step (a) contains more than 98% by weight of 2-hydroxy-4-methylthiobutyramide.

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21. (New) A process according to claim 1, wherein the molar quantity of water to 2-hydroxy-4-methylthiobutyronitrile is between 1 and 2.5.

<sup>35</sup>  
22. (New) A process according to claim 1, wherein the hydrating step (a) is carried out at a temperature ranging between 0 and 50 °C.

<sup>36</sup>  
23. (New) A process according to claim 1, wherein the hydrating step (a) is carried out at a pressure ranging between 0.01 and 3 bar.

<sup>37</sup>  
24. (New) A process according to claim 1, wherein during the hydrolyzing step (b) a sufficient quantity of water is added in order to maintain the reaction mass in a homogeneous form.

<sup>38</sup>  
25. (New) A process according to claim 24, wherein the minimum quantity of water added is 28% by weight relative to the reaction mass.

<sup>39</sup>  
26. (New) A process according to claim 1, wherein the hydrolyzing step (b) is carried out at temperature ranging between 90 and 130°C.

<sup>40</sup>  
27. (New) A process according to claim 1, wherein the hydrolyzing step (b) is carried out at pressure ranging between 0.5 and 5 bar.

<sup>41</sup>  
28. (New) A process according to claim 15 further comprising:  
supplying the 2-hydroxy-4-methylthiobutyronitrile as a concentrated feed stream during  
the hydrating step (a); and  
maintaining the molar quantity of water to 2-hydroxy-4-methylthiobutyronitrile between  
1 and 3.

<sup>42</sup>  
29. (New) A process according to claim 21 further comprising:

supplying the 2-hydroxy-4-methylthiobutyronitrile as a concentrated feed stream during  
the hydrating step (a); and  
maintaining the molar quantity of water to 2-hydroxy-4-methylthiobutyronitrile between  
1 and 2.5 .

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30. (New) A process according to claim 28 or 29, wherein the concentrated feed stream  
comprises about 80 wt.% 2-hydroxy-4-methylthiobutyronitrile.

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31. (New) A process according to claim 15 further comprising:  
supplying the 2-hydroxy-4-methylthiobutyronitrile as a dilute aqueous feed stream during  
the hydrating step (a); and  
maintaining the molar quantity of water to 2-hydroxy-4-methylthiobutyronitrile between  
1 and 3 by evaporating excess water.

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32. (New) A process according to claim 21 further comprising:  
supplying the 2-hydroxy-4-methylthiobutyronitrile as a dilute aqueous feed stream during  
the hydrating step (a); and

maintaining the molar quantity of water to 2-hydroxy-4-methylthiobutyronitrile between  
1 and 2.5 by evaporating excess water.

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33. (New) A process according to claim 31 or 32, wherein the dilute aqueous feed stream  
comprises about 50 wt.% 2-hydroxy-4-methylthiobutyronitrile.

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34. (New) A process according to claim 31 or 32, wherein the evaporated excess water is  
recycled and used in the hydrolyzing step (b). - -